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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,273	04/09/2002	Carlo Perego	217721US0 XPCT	1877
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.				
1940 DUKE STREET				
ALEXANDRIA, VA 22314				
EXAMINER				
DANG, THUAN D				
ART UNIT		PAPER NUMBER		
1764				

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,273

Applicant(s)

PEREGO ET AL.

Examiner

Thuan D. Dang

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Interview Summary (PTO-413)

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 20, applicants added new matter into these claims since as indicated by applicants, the specification supports only a method of making ZSM-12 not any unspecified catalyst as recited in the claims (see the specification).

Regarding claims 17-19, the limitation "for 25 hours or **more**" (emphasis added by the examiner) is a new matter since the word "more" makes the timing go up to indefinite such as a century. Therefore, the specification does not support this timing.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 17-19, "25 hours or more" is indefinite since it is unclear how long the word "more" cover.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leyshon et al (5,026,936) in view of Rosinski et al (3,832,449).

Leyshon discloses a process of cracking an olefinic feedstock such as hexene into propylene in the presence of a catalyst containing ZSM-12 zeolite (the abstract; col. 3, line 38 thru col. 4, line 19).

As disclosed by Leyshon, the ZSM-12 used for the cracking is disclosed by Rosinski.

Rosinski discloses making a ZSM-12 which has having a silica/alumina ratio of from 20-100 (the abstract).

Leyshon discloses that the feed can be olefin or paraffin or mixture (col. 3, lines 39-45).

Therefore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Leyshon process by using any olefin feed having any

percentage of olefin to arrive at the applicants claimed process since it is expected that using any feed would yield similar results.

The temperature of the process can be found on column 3, lines 48-50 of Leyshon.

The WHSV can be found on column 3, lines 59-62 of Leyshon.

The activity and conversion of the Leyshon catalyst is expected to be the same as the catalyst used in the claimed process since both is ZSM-12 and having similar silica/alumina.

Rosinski also discloses how the ZSM-12 is prepared including steps: adding sodium aluminate with colloidal silica and tetraalkylammonium hydroxide; crystallization, washing with water, drying, and calcinations, ion exchanging (col. 2, lines 1-25; examples).

It appears that Rosinki does not disclose using tetramethylammonium hydroxide in the place of tetraalkylammonium hydroxide, ammonium acetate as ion-exchange agent, and calcination in air.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Leyshon process by using tetramethylammonium hydroxide as the tetraalkylammonium hydroxide, ammonium acetate as ion-exchange agent and calcination of the catalyst in the air since it expected using any material and calcination in the air or in the absence of air would yield ZSM-12 having similar activity.

Regarding claim 13, although Leyshon does disclose using a ZSM-12 having a silica/alumina of from 150 to 200. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Leyshon process by using a ZSM-12 having a silica/alumina higher than 100 such as 150 to arrive at the applicants'

claimed process since applicants do not show any criticality for using a ZSM-12 catalyst having that range of silica and alumina.

Response to Arguments

Applicant's arguments filed 3/29/2005 have been fully considered but they are not persuasive.

The argument that example 3 and example 4 show the difference of performance of ZSM-12 having silica/alumina of 100 (claimed) and the same having of silica/alumina of 250 (comparative) is not persuasive since applicants do not claim using a ZSM-12 having 100 (see claims). Note that it has been established that evidence of unobviousness must be commensurate in scope with the claims. *In re Kulling* 14 USPQ 2d 1056, 1058 (Fed. Cir. 1990); *In re Clemans* 206 USPQ 389 (CCPA 1980); *In re Dill* 202 USPQ 805, 808 (CCPA 1979); *In re Greenfield* 197 USPQ 227 (CCPA 1978); *In re Lindner* 173 USPQ 356, 358 (CCPA 1972); *In re Hyson* 172 USPQ 399 (CCPA 1972); *In re Tiffin* 171 USPQ 294 (CCPA 1971); *In re McLaughlin* 170 USPQ 209 (CCPA 1971); *In re Kennedy* 168 USPQ 587 (CCPA 1971); *In re Law* 133 USPQ 653 (CCPA 1962).

The argument that example 3 and example 5 shows that ZSM-12 outperforms ZSM-5 is not persuasive since these two zeolites have different ratio of Silica/Alumina. Therefore, it is totally incorrect to say a ZSM-12 is better than ZSM-5 having a similar Silica/Alumina. Note that it has been established by the patent law that the cause and effect sought to be proven is lost here in the welter of unfixed variables. *In re Heyna*, 360 F.2d 222, 228, 149 USPQ 692, 697 (CCPA 1966).

The argument that in example Leyshon uses ZSM-5 is not persuasive since it has been held that a disclosure in a reference is not limited to its specific illustrative examples, but must be considered as a whole to ascertain what would be realistically suggested thereby to one ordinary skill in the art. *In re Uhlig*, 54 CCPA 1300 376 F2d 320; 153 USPQ 460.

The argument that according to *In re Baird*, a claimed species of subgenus is encompassed by a prior art genus is not sufficient by itself to establish a prima facie case of obviousness is not persuasive since Leyshon discloses clearly that ZSM-12 in a very limited list of others can be used as the catalyst for cracking olefins (see col. 4, lines 13-14).

The argument that "for 25 or more" is supported figure 1 which shows until at least 140 hours is not persuasive since figure shows only up maximum around 140 hours not such as 160 hours or infinitive.

The argument that with regard to claim 20, while the relied on disclosure is for preparation of ZSM-12, ZSM-12 is a species of a large-pore zeolite would be prepared in a similar manner is not persuasive since even these large pore zeolites other than ZSM-12 cannot be recognized in the specification. If so, it is unclear in the specification which large pore zeolites can be similarly produced.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

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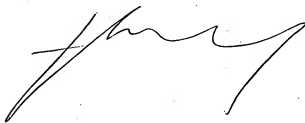
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

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A handwritten signature in black ink, appearing to read 'Thuan D. Dang', is written over the printed name and title.